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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,025	04/15/2004	Ellis Edward Bishop	AUS920040026US1	7494

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EXAMINER	
FAN, HUA	

ART UNIT	PAPER NUMBER
2456	

NOTIFICATION DATE	DELIVERY MODE
08/02/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/825,025	BISHOP ET AL.	
	Examiner	Art Unit	
	HUA FAN	2456	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3 and 5-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3 and 5-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/6/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to amendment/reconsideration filed 7/6/2010, the amendment/reconsideration has been considered. Claims 1, 3, and 5-35 are pending for examination, the rejection cited as stated below.

Response to Arguments

2. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claims 33-35 recite "computer readable storage medium" which is not defined or exemplified in the specification. It is not clear whether or not the recited "computer readable storage medium" contains any transitory media such as "transmission type medium", "signal", or "carrier wave", etc. For the sake of examination, the examiner interprets "computer readable storage medium" broadly as comprising both non-transitory and transitory media.

.Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.
> Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural

> phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.
> ... a signal does not fall within one of the four statutory classes of Sec. 101.
> ... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

5. Claims 33-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 33 is drawn to functional descriptive material recorded on a computer readable storage medium. However, the specification does not define or exemplify "computer readable storage medium". The examiner presumes for the sake of examination that the term "computer readable storage medium" comprises both transitory and non-transitory medium.

"A transitory, propagating signal ... is not a "process, machine, manufacture, or composition of matter." Those four categories define the explicit scope and reach of subject matter patentable under 35 U.S.C. § 101; thus, such a signal cannot be patentable subject matter." (*In re Petrus A.C.M. Nuijten;* Fed Cir, 2006-1371, 9/20/2007).

Because the full scope of the claim as properly read in light of the disclosure appears to encompass non-statutory subject matter, the claim as a whole is non-statutory. The examiner suggests amending the claim to *include* the disclosed **non-transitory** computer readable storage media, while at the same time *excluding* the transitory media such as signals, carrier waves, etc. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 3, and 5-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1) Claims 1 recites "a plurality of capacity resources are allocated in accordance with a capacity plan…identify a first set of capacity obligations that can be met with the plurality of capacity resources…generating, by the processor, the capacity plan…". The relationship between the capacity plan and the plurality of capacity resources is not clear. In addition, it is not clear what "the plurality of capacity resources" refers to. According to the recited limitations, "a plurality of capacity resources are allocated in accordance with a capacity plan", however, before the step of "generating, by the processor, the capacity plan", "the plurality of capacity resources" is compared and identified to be "met by a first set of capacity obligations". Since the capacity plan has not been generated, therefore the plurality of capacity resources cannot have been allocated, it is not clear what "the plurality of capacity resources" refer to. For the sake of examination, the examiner assumes "any plurality of capacity resources".

2) Claim 1 recites in limitation 3, "the plurality of existing resources". This term lacks sufficient antecedent basis. In addition, it is not clear regarding the relationship between "the plurality of existing resource" and "the plurality of capacity resources" recited in the same limitation. For the sake of the examination, the examiner assumes "any plurality of resources".

3) Claim 1, limitation 4, and claim 34, recite "a task control block time". The scope of this term cannot be determined lacking definition in either the specification or the claims. For the sake of the examination, the examiner assumes "time".

4) Claim 3, the last limitation, and claims 32 and 33, limitation 6, recite "wherein the plurality of standard data comprises central processing unit minutes, disk storage, net bandwidth, memory used". It is not clear whether the limitation meant "wherein the plurality of standard data comprises central processing unit minutes, disk storage, net bandwidth, **and** memory used", or "wherein the plurality of standard data comprises central processing unit minutes, disk storage, net bandwidth, **or** memory used". For the sake of examination, the examiner assumes wherein the plurality of standard data comprises central processing unit minutes, disk storage, net bandwidth, **and** memory used".

5) Claims 5 and recite "before gaining approval for the capacity plan…". The term "gaining approval for the capacity plan" lacks sufficient antecedent basis. For the sake of the exmination, the examiner assumes "before implementing the modified capacity plan", in light of point 1) above since the plan existed before "generating…the capacity plan".

6) Claims 7, 13, 16, 22, 24, and 28 recite "wherein handling a capacity request comprise the steps of…". The term "handling a capacity request" lacks sufficient antecedent basis.

7) Claim 32 recites "substantially identifies", "substantially describes". The scope of these terms cannot be determined due to relative terms used together with "identifies", "describes", etc.

8) Independent claims 1, 32-33 recites "analyzing a time required to move a plurality…", however, such a "time" is not referred to in later steps. Therefore the relationship between this critical element (since recited in the independent claims) to other limitations in the same claims is not clear.

9) Claim 6 recite "during the plan period". The term "the plan period" lacks sufficient antecedent basis. For the sake of examination, the examiner assumes "any plan period".

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agarwal et al (US publication 2003/0028642), in view of Katayama (US publication 20030177241).

As to claim 1, Agarwal et al discloses a process comprising the steps of:

providing a shared computing environment in which a plurality of capacity resources are allocated in accordance with a capacity plan ([0079]);

gathering, by a processor of a computer, a plurality of capacity data for a capacity resource set, the capacity resource set including a central processing unit, a storage, a memory, a network hardware, and a plurality of peripheral devices ([0025], "managing server resources"; [0026], "a server farm can be viewed as a collection of resources. These include hardware (computers…networking machinery…personal computer servers…". "Server…computers" implies CPU, storage, memory; "personal computer" implies a plurality of peripheral devices, such as keyboard or mouse).

analyzing, by the processor, the plurality of capacity data by comparing one or more capacity obligations with the plurality of existing resources ([0188]) to identify a first set of capacity obligations that can be met with the plurality of capacity resources ([0162], "conform to

the client's SLAs…These demands of a user...to be increased"; [0207], for those clients for whom the demand increase were not dropped, the SLA can be met with the system resource), and to identify a second set of capacity obligations that require a plurality of additional resources ([0207], for those clients for whom the demand increase were dropped due to insufficient system capacity, their SLA obligation cannot be met without additional system resource);

generating, by the processor, the capacity plan for using the plurality of identified existing resources and the plurality of identified additional resources to meet the one or more capacity obligations ([0188]);

Agarwal does not expressly disclose analyzes, by the processor, a time required to move a plurality of workloads from one set of central processing unit engines to another set of central processing unit engines in order to meet the second set of capacity obligations, wherein the time includes a task control block time. Katayama discloses analyzing a time required to move workloads from one computer to another computer in order to meet a capacity obligation ([0043]).

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to modify the teachings disclosed by Valdivia et al, using the concept taught by Katayama regarding analyzing a time required to move a workload from one processor to another processor and apply the concept to multiple workloads and processors. The suggestion/motivation of the combination would have been to estimate the overhead of load balancing to improve overall efficiency (Katayama, [0043]).

As to claim 6, Agarwal-Katayama discloses the process of claim 1 further comprising the step of, before gaining approval for the capacity plan, analyzing the performance impact of the

capacity plan by determining the impact to the components of the capacity plan during the plan period (see 112 rejection point 5) above for the examiner's interpretation. See Agarwal, [0265], last three lines; and [0270]-[0271] for case I, and [027]-[0273] for case II. For each case, the performance impact for ach client is analyzed by the Resource Manager).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUA FAN whose telephone number is (571)270-5311. The examiner can normally be reached on M-F 9am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rupal D. Dharia/
Supervisory Patent Examiner, Art Unit 2400

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